STATE OF FLORIDA

ART GRAHAM
CHAIRMAN

Capital Circle Office Center
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850
(850) 413-6040

Public Service Commission

December 1, 2014

Via e-mail: A-and-R-Docket@epa.gov

Administrator Gina McCarthy
Air and Radiation Docket and Information Center
Environmental Protection Agency
Mail Code: 2822T
1200 Pennsylvania Ave., NW
Washington, DC 20460

Re: Carbon Pollution Emission Guidelines for Existing Sources: Electric Utility Generating Units; Docket ID No. EPA-HQ-OAR-2013-0602

Dear Administrator McCarthy:

The Florida Public Service Commission authorized on November 25, 2014, the filing of the attached comments on EPA's June 18, 2014 proposed rule on carbon dioxide emissions from existing fossil fuel-fired electric generating units. The staff contact on these comments is Mark Futrell, who may be reached at 850-413-6692.

Sincerely,

Art Graham
Chairman

AG/ao

cc: Commissioner Lisa Polak Edgar
Commissioner Ronald A. Brisé
Commissioner Eduardo E. Balbis
Commissioner Julie I. Brown

UNITED STATES OF AMERICA
BEFORE THE
ENVIRONMENTAL PROTECTION AGENCY

Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units

Docket ID No. EPA-HQ-OAR-2013-0602

COMMENTS OF THE FLORIDA PUBLIC SERVICE COMMISSION

The Florida Public Service Commission (FPSC or Commission) respectfully requests the consideration of comments as provided herein on the proposed Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, also referred to as the Clean Power Plan (Proposed Rule).[1] The FPSC recognizes the necessity and role of the U.S. Environmental Protection Agency (EPA) in addressing public health and environmental issues. The FPSC is concerned, that the Proposed Rule in its current form will reduce fuel diversity, adversely impact reliability, and impose unacceptable cost increases for a large number of Florida's electric consumers. Even with the clarifications provided by EPA's October 2014 Notice of Data Availability (NODA), the structure of the Proposed Rule is such that meaningful comments require unique knowledge of each state's compliance plan and predetermination of the reasonable achievability of EPA's modeled emission performance requirements. Without knowing the structure of the State Implementation Plan, the FPSC cannot address the achievability of EPA's proposed emission performance requirements through EPA's best system of emission reduction (BSER) approach or any other compliance approach with certainty. The comments below highlight the particular attributes of Florida and its electric industry, the FPSC's statutory authority, concerns with the Proposed Rule, and areas of concern with EPA's proposed interim and final emission performance requirements for Florida.

[1] The FPSC previously provided input into EPA's development of proposed standards for carbon emission reductions from existing sources by letter of December 13, 2013, The Florida Public Service Commission's Responses to EPA's Questions to States Regarding the Design of a Program to Reduce Carbon Pollution from Existing Power Plants (FPSC December 13, 2013 Comments).

These comments presume EPA will adopt carbon emission rules based on the strategy, or a similar strategy, in the Proposed Rule notice. The Commission's comments contained herein are meant to request Florida-specific considerations for the application of the Proposed Rule and should not be construed as support or opposition to EPA adopting carbon emission rules, or agreement that the EPA has the authority to regulate carbon dioxide (CO_2) emissions from existing power plants under Section 111(d) of the Clean Air Act.

FPSC Concerns and Recommendations to EPA:

A. FPSC Jurisdiction

- Do not bypass or preempt the FPSC's exclusive jurisdiction under Florida Statutes.
- Defer to the Public Utility Regulatory Policies Act and Florida laws when calculating renewable energy potential for Florida.

B. Best System of Emission Reduction (BSER)

- The BSER has not been adequately demonstrated based on Florida policies and circumstances.
- Set standards only for affected EGUs based on specific technology and equipment at these facilities or other onsite actions within a utility's control.
- A multi-year average baseline should be used instead of a single year in the development of emission performance requirements.

C. Recognition of Early Actions in Florida

- Florida's requirements should reflect recent actions by Florida's electric utilities that have reduced carbon emissions.

D. Interim Performance Requirement

- Florida's interim emission performance requirements should not be mandatory.

E. Corrections to Building Blocks

- Modify Florida's emission performance requirements applied to Florida's coal-fired generation to recognize prior actions taken to improve heat rates.
- Correct Florida's interim and final emission performance requirements to reflect the natural gas combined cycle net, not gross, capacity.
- "At risk" nuclear generation should not be used to calculate Florida's requirements.
- Adjust the renewable energy generation requirement to reflect Florida-specific policies and circumstances.
- The EPA's emission performance requirements should not include mandatory implementation of end-use energy efficiency programs, but should allow for voluntary inclusion within a State Implementation Plan.

F. FPSC Concerns Regarding Proposed Rule Implementation

- The Proposed Rule compromises Florida's ability to maintain a diversified generation fuel source mix.
- The rapid addition of large scale intermittent generating resources may compromise grid reliability.
- Allow Florida to incorporate a reliability safety valve into its State Implementation Plan to guard against unforeseen impacts on reliability and cost.
- The proposed emission performance requirements will likely require substantial compliance costs for Florida.

I. FPSC Jurisdiction

The FPSC is charged with ensuring that Florida's investor-owned electric utilities provide safe, reliable energy for Florida's consumers in a cost-effective manner. The FPSC regulates five investor-owned electric utilities, including aspects of rate setting, operations, and safety. The FPSC additionally regulates 35 municipally-owned and 18 rural electric cooperatives as to safety, rate structure, and oversight of generation and transmission planning.

The FPSC's exclusive jurisdiction in Florida includes jurisdiction to require electric power conservation and reliability within a coordinated grid, for operational as well as emergency purposes.[2] The FPSC has exclusive jurisdiction over the planning, development, and maintenance of a coordinated electric power grid throughout Florida to assure an adequate and reliable source of energy and the avoidance of further uneconomic duplication of generation, transmission, and distribution facilities.[3] The FPSC is charged with determining need for all new steam electric generating facilities and solar generation over 75 megawatts (MW).[4] The FPSC has the responsibility of allowing an electric utility's recovery from ratepayers of prudently incurred environmental compliance costs, including costs incurred in compliance with the Clean Air Act.[5]

[2] Section 366.04(2)(c), Florida Statutes
[3] Section 366.04(5), Florida Statutes
[4] Section 403.519, Florida Statutes
[5] Section 366.8255(2), Florida Statutes

In addition, the FPSC has exclusive jurisdiction to implement the Florida Energy Efficiency and Conservation Act (FEECA).[6] FEECA emphasizes reducing the growth rates of weather-sensitive peak demand, reducing and controlling the growth rates of electricity consumption, and reducing the consumption of expensive resources, such as petroleum fuels. Pursuant to FEECA, the FPSC has authority to adopt goals for increasing the efficiency of energy consumption and increasing the development of demand-side renewable energy systems.[7] Importantly, in adopting these goals, the FPSC evaluates the full Florida-specific technical potential of all available demand-side and supply-side conservation and efficiency measures, and takes into consideration the costs and benefits to participating customers and ratepayers as a whole, and the costs imposed by state and federal regulations on greenhouse gas emissions.[8] Once goals are established by the FPSC, the utilities must submit cost-effective demand-side management (DSM) plans, which contain the DSM programs designed to meet the approved goals. Among its powers, the FPSC may modify or deny demand-side management plans or programs that would have an undue rate impact from the costs passed on to customers.[9]

The Florida Legislature has established policies to encourage the development of renewable energy resources and to ensure these resources contribute to reliable electric service at a reasonable cost. Florida law requires utilities to facilitate customer-owned renewable energy resources through standard interconnection agreements and net metering.[10] The Public Utility Regulatory Policies Act (PURPA) and Florida law establish requirements relating to the purchase of capacity and energy by investor-owned electric utilities from renewable energy producers.[11] Utilities must purchase capacity and energy at rates that do not exceed the respective utility's avoided cost, thus protecting customers from undue rate impacts. Also, renewable energy producers, which are able to meet minimum performance requirements during a respective utility's peak demand period, are eligible for fixed capacity payments. Investor-owned utilities may recover from customers prudent and reasonable costs associated with renewable energy purchase power agreements. PURPA and Florida law provide the legal

[6] Sections 366.80 – 366.82, Florida Statutes
[7] Section 366.81, Florida Statutes
[8] Section 366.82(3), Florida Statutes
[9] Section 366.82(7), Florida Statutes
[10] Section 366.91(5) and (6), Florida Statutes
[11] Sections 366.051 and 366.91(3), Florida Statutes

framework for the interconnection and economic parameters to develop renewable energy. As such, Florida-specific policies should be inherent to the Proposed Rule. Therefore, EPA must defer to existing federal and state-specific policies in its calculation of renewable energy potential for Florida and other states.

The EPA's authority to propose pollution control regulations is limited by the scope of its delegated authority granted under the Clean Air Act (CAA).[12] The CAA authorizes EPA to promulgate regulations on CO_2 emissions only as they relate to pollutant emissions. The EPA has not been granted regulatory authority over Florida's planning, development, and maintenance of a coordinated electric power grid, electric power energy efficiency and conservation, or the development of renewable energy resources in Florida. For this reason, the FPSC's exclusive jurisdiction in these areas is not subject to preemption by the CAA, and the Proposed Rule may not interfere with, pre-empt, or in any manner attempt to or effect a shift of the Commission's jurisdiction to EPA or to any other federal or state agency or department.

Additionally, the FPSC supports the National Association of Regulatory Utility Commissioners Resolution on Increased Flexibility with Regard to the EPA's Regulation of Greenhouse Gas Emissions from Existing Power Plants, which provides in part: "EPA should not intrude on the states' jurisdiction over decisions regarding integrated resource planning or the mix of fuels and resources."[13] The proposed emission performance requirements set by EPA necessarily require compliance and enforcement activities that include changing dispatch methodology, efficiency measures, the type of generation to be constructed, and renewable energy considerations, all of which are matters within the FPSC's exclusive jurisdiction. Intrusion by EPA into these matters directly through a Federal Implementation Plan or by proxy through a State Implementation Plan would interfere with the FPSC's jurisdiction over the generation and distribution of electricity, Florida's electricity grid, and economic regulation of electric retail service. Any changes to this exclusive jurisdiction are a matter for consideration by the Florida Legislature.

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[12] *E.g., City of Park City v. Alon USA Energy Inc. (In re Methyl Tertiary Butyl Ether Prods. Liab. Litig*), 341 F. Supp. 2d 386, 406-408 (S.D.N.Y. 2004), citing to *Fidelity Fed. Savs. and Loan Association de la Cuesta*, 458 U.S. 141, 154 (1982). *See also City of Arlington v. FCC*, 133 S. Ct. 1863, 1869 (2013) (The power of agencies charged with administering congressional statutes to act and how they are to act is authoritatively prescribed by Congress).

[13] http://www.naruc.org/Resolutions/EPAsRegulationofGreenhouseGasEmissionsfromExistingPowerPlants.pdf.

II. Best System of Emission Reduction (BSER)

The FPSC is greatly concerned with the methodology EPA used to set the BSER and the resulting Florida performance requirements for existing electric generating units (EGUs). As previously noted, EPA's assumptions and analysis supporting its Proposed Rule, and the Florida CO_2 pounds per megawatt-hour (lbs./MWh) emission performance requirements presume an implementation strategy that either bypasses or preempts the FPSC's exclusive jurisdiction under Chapters 366 and 403, Florida Statutes. The EPA's Proposed Rule establishes CO_2 lbs./MWh emission performance requirements using national or regional averages rather than assessing what is reasonable and technically achievable in Florida. Moreover, EPA did not consider Florida-specific policies in developing the Proposed Rule. The CAA requires EPA to set proposed emissions performance requirements to reflect:

> the degree of emission limitation **achievable** through the application of the best system of emission reduction which (**taking into account the cost** of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been **adequately demonstrated**.[14] (emphasis added).

When establishing a performance standard based on a BSER determination, EPA must consider among other factors, the system of emission reduction that is technically feasible[15] and the economic costs to the industry.[16] The emission performance requirements must be based on relevant and adequate data, and technology must be achievable for standards promulgated by EPA.[17] Further, "To be achievable, a standard must be capable of being met under the most adverse conditions which can reasonably be expected to recur."[18]

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[14] CAA, Section 111(a)(1); 40 CFR 60.21(e).
[15] *Essex Chemical Corp v. Ruckelshaus*, 486 F. 2d 427, 433-434 (D.C. Cir 1973)(stating that an achievable standard is one which is within the realm of the adequately demonstrated system's efficiency and which need not necessarily be routinely achieved within the industry prior to its adoption), *cert denied*, 416 U.S. 969 (1974).
[16] *Portland Cement Association v. Ruckelshaus*, 486 F. 2d 375, 385, 402 (D.C. Cir. 1973), *cert. denied* 417 U.S. 921 (1974).
[17] *Id*. p. 393.
[18] *White Stallion Energy Ctr., LLC v. EPA*, 748 F. 3d 1222 (S.D. Cal. 2014), citing to *Nat'l Lime Association v. EPA*, 627 F. 2d 416, 431 n. 46, 200 US App. DC 363 (D.C. Cir. 1980).

The FPSC contends that EPA's proposed BSER in its current form is unreasonable, extremely difficult to achieve both in scope and timeline, and should not be used to set an emissions performance requirement for Florida. While EPA's NODA goes in the direction of acknowledging some of these concerns, it does not provide solutions. The FPSC's comments are intended to offer such solutions.

The proposed emission performance requirements for Florida are not based on a BSER that has been adequately demonstrated, as required by Section 111(d). An adequately demonstrated system is one that has been shown to be reasonably reliable, reasonably efficient, and that can reasonably be expected to serve the interest of pollution control without becoming exorbitantly costly in an economic or environmental way.[19] The EPA's basis for stating that its BSER analysis is adequately demonstrated is that each of the building blocks may be well-established in some, but not all states.[20] This basis fails to take into account the Florida-specific factors discussed throughout these comments. The disclaimer in the Notice of Rulemaking that none of the building blocks in the BSER "are being mandated, the states are free to use any compliance strategy" does not alleviate the FPSC's concerns.

As a part of its analysis of the Proposed Rule, the FPSC solicited comments from Florida's generating utilities and other interested persons.[21] Based in part on the responses, the FPSC believes that EPA's CO_2 emission performance requirements for Florida cannot be met solely by increased efficiency of operating coal-fired units, increased dispatch of natural gas-fired electrical units, and decreased use of coal-fired EGUs. The Proposed Rule would require Florida's utilities to attempt to implement all of the proposed building blocks, despite the fact that these proposed requirements do not take into account Florida's specific policies and circumstances. Therefore, the BSER has not been adequately demonstrated as an effective approach to achieve EPA's proposed emission performance requirements for Florida.

[19] *Essex Chemical Corp*. 486 F. 2 p. 433.
[20] U.S. Environmental Protection Agency Legal Memorandum on Proposed Carbon Pollution Emission Guidelines for Existing Electric Utility Generating Units. p. 15.
[21] http://www.floridapsc.com/utilities/electricgas/EPAcarbonrules/

Consistent with the FPSC's December 13, 2013 Comments in this proceeding, the FPSC continues to maintain that EPA should set Florida's emission performance requirement based solely on onsite actions at affected EGUs. As evidenced by both emission rates and mass ton reductions, Florida utilities have made great progress in CO_2 reductions in recent years by repowering existing units and adding efficient natural gas combined cycle units. The EPA should only rely on existing EGUs, including the past actions of these EGUs, in establishing reasonable CO_2 reductions.

Since 1981, the FPSC has established DSM and energy efficiency goals for the utilities serving 85 percent of Florida's load. The EPA's national application of energy efficiency reductions based on existing and new load growth, however, is not an appropriate standard setting strategy. Likewise, PURPA and Florida law provide the legal framework for the development, interconnection, and economic parameters of renewable energy. The EPA must defer to existing federal and state-specific policies in its calculation of renewable energy potential for Florida and other states. The FPSC, however, strongly believes EPA lacks jurisdiction to include Building Blocks 3 and 4 in its BSER and the proposed emission performance requirements. For these reasons, EPA should revise its BSER and the emission performance requirements to be based exclusively on onsite actions at affected EGUs.

The FPSC also believes it is inappropriate to select a single year (2012) in the development of emission performance requirements. This approach does not take into account anomalies affecting the dispatch of generation in a given year, that could occur in a particular state or market. For example, 2012 was not a typical year for electricity generation in Florida as historically low natural gas prices caused an unusual increase in the use of natural gas-fired generation. During a normal year, more coal-fired generation would have been dispatched, resulting in a higher CO_2 annual emission rate for the state. This is particularly true for utilities that are more dependent on coal-fired generation. Therefore, EPA's use of 2012 as the starting point skews the emissions performance requirements for Florida. The use of a multi-year average when setting the baseline data can dampen the effect of any electric market production, weather, or fuel supply anomaly that may occur in a single year.

III. Recognition of Early Actions in Florida

In the FPSC's December 13, 2013 Comments in this proceeding, the FPSC asserted that EPA's guidelines should avoid setting a performance level that is based on a national uniform approach and recognize the varying characteristics of specific states and regions of the U.S. By applying national averages in establishing state-specific emission performance requirements, EPA did not accurately reflect Florida's ability to comply with the Proposed Rule. The EPA's Proposed Rule does not consider past utility actions by Florida's utilities that were made to improve overall generating efficiency. These past actions have had a beneficial impact on air quality and have resulted in permanent CO_2 emission reductions per MWh. Failure by EPA to consider these early actions is unreasonable.

The proposed emission performance requirements would result in a 38 percent reduction in CO_2 emissions from the 2012 baseline year. This, in effect, penalizes Florida for having taken early actions to reduce CO_2 emissions by requiring stringent, and more difficult to attain, emission performance requirements relative to EPA's 2012 baseline year. The long history of early actions in Florida that has contributed to the declining CO_2 emissions restricts the technical feasibility of meeting the national assumptions in EPA's proposed building blocks. The Florida Department of Environmental Protection, for example, estimates that Florida's average CO_2 emissions profile, for power produced in Florida, decreased from 1,718 lbs./MWh in 2005 to 1,291 lbs./MWh in 2012, a 25 percent reduction in CO_2 emission rates. The requirement of an additional 38 percent reduction is unreasonable.

Florida's utilities have invested in generation efficiency improvements, repowerings, and nuclear uprates, which have had a beneficial impact on Florida's average CO_2 emissions profile. In addition, Florida's utilities have invested heavily in compliance with other recent EPA air rules, including Mercury Air Toxics Standards and the Cross-State Air Pollution Rule. Florida's ratepayers have borne the costs for these investments. As a result, a significant portion of cost-effective actions to lower emissions that are under each utility's control has already been achieved through regulatory and market driven responses. The FPSC urges EPA to adjust

Florida's emission performance requirements to reflect a BSER that can be achieved in Florida and accounts for past utility actions.

IV. Interim Performance Requirement

The FPSC believes the aggressive compliance timeframe is unrealistic. The proposed interim emission performance requirement for Florida is only marginally different from the final requirement, and requires a substantial proportion of the 2030 requirement CO_2 emissions reductions to occur beginning in 2020. Although EPA outlines a few avenues for states to have additional time for submitting their compliance plans, the Proposed Rule does not allow corresponding flexibility in the interim performance period. Regardless, Florida will have had to make compliance decisions before there is certainty of EPA's final rule and before having an approved state implementation plan. Compliance with the proposed emission performance requirements necessitates long-term decisions and investments, potential legislative action, and must account for the statutory timing of siting and constructing new generation, transmission, and pipeline capacity that will likely be needed. As such, under Florida's existing statutory and regulatory regimes, the State as a whole will not be able to achieve EPA's proposed emission performance requirements within EPA's timeline.

Compliance with EPA's proposed emission performance requirements will likely take more time than EPA envisioned. Particularly problematic is the time required to complete the necessary infrastructure improvements. Two recent examples in Florida are illustrative of project timing. A proposed nuclear project in southern Florida was originally scheduled to complete the Florida Site Certification Application review within 14 months, yet the review schedule was waived and ultimately extended to almost 60 months.[22] The protracted timeline was required in order to address concerns stemming from electric transmission expansion. In 2013, the Commission approved as prudent, a utility's request to enter into a long-term gas transportation contract associated with the proposed Sabal Trail pipeline, which is not expected

[22] http://www.doah.state.fl.us/ALJ/searchDOAH/default.asp, Florida Division of Administrative Hearings Case No. 09003575.

to commence natural gas delivery until 2017.[23] Whether these cases are typical of future projects is uncertain; however, they illustrate that three years may not be sufficient time to study, permit, and complete infrastructure additions necessary to comply with the interim emission performance requirements. The EPA's 2020 threshold date appears to be more aspirational than realistic when one considers the scope of detailed reviews and justification necessary to support additional power plants, transmission, and pipeline investments that could be needed. The FPSC notes that EPA's NODA appears to recognize the need for increased flexibility to address the timing of various infrastructure projects.

The FPSC asserts that even with the flexibility of expanding timelines, Florida's interim emission performance requirements should not be mandatory. Florida's interim goals, used for tracking or reporting, should be established during the state implementation plan development process. This will allow Florida to review appropriate actions to mitigate the impacts of premature retirements of certain generating units. Florida and the affected entities should be given a more flexible glide path toward the ultimate performance requirement.

V. Corrections to Building Blocks

The following analysis addresses each Building Block individually to illustrate how EPA's assumptions of the building blocks used to establish the BSER are not technically feasible and would result in unreasonable costs. Any suggestion to one particular Building Block should not be interpreted as support to expand other Building Blocks to make up any emissions reduction shortfalls due to the interactive effects between the various Building Blocks and potential operational constraints as discussed throughout our comments.

[23] Order No. PSC-13-0505-PAA-EI, in Docket No. 130198-EI, issued October 28, 2013, In re: Proposed Agency Action Order on Florida Power & Light Company's Proposed Sabal Trail Transmission, LLC and Florida Southeast Connection Pipelines.

a. Building Block 1

In Building Block 1, EPA assumes that Florida will achieve CO_2 reductions through a six percent heat rate improvement at its coal-fired generating units. The FPSC contends that the national assumption of a heat rate improvement of six percent for Florida's coal-fired generating fleet is not technically feasible, given the long history of efficiency improvements to Florida's fleet. In 1980, the FPSC developed a generating performance incentive factor program (GPIF) for investor-owned utilities,[24] which encourages utilities to maximize unit heat rate efficiency of electric baseload generating units. Unit specific heat rate and availability requirements are set annually through a formal hearing procedure, and the FPSC has the authority to reward utilities that reach their requirements and penalize those utilities that do not. Effectively, the GPIF program provides multi-million dollar incentives for utilities to maximize supply-side energy efficiency improvements, thus reducing average fuel consumed per MWh at the source of air emissions.

In over 30 years of offering incentives, the FPSC has not seen consistent heat-rate improvements in the six percent range as suggested in the Proposed Rule. In the last five years alone, changes in EGU specific heat rate efficiencies ranged from negative eight percent to positive four percent, even with the GPIF program incentives. These fluctuations appear to be driven, in part, by efforts to comply with environmental requirements. Rather than relying on an across the board six percent assumption, we propose a more Florida-specific analysis of achievable, permanent and cost-effective CO_2 emission reductions. Such an analysis will take into account, not only potential for heat rate improvements (which can be verified through historical data under incentive programs like the GPIF program), but also steps already taken to increase efficiencies in Florida's fleet relative to EPA's baseline.

The EPA has not adequately demonstrated the feasibility of the proposed emission requirements for Florida under Building Block 1. This is supported in part by a recent communication by Sargent & Lundy, LLC, which prepared a study on heat rate improvement

[24] Order No. 9558, in Docket No. 800400-CI, issued September 19, 1980, In re: Investigation of Fuel Cost Recovery Clause Application to Investor-owned Electric Utilities.

that was relied on by EPA in its technical support documentation. Sargent & Lundy, LLC, states that its 2009 report on heat rate improvements "did not conclude that any individual coal-fired EGU or aggregation of coal-fired EGUs can achieve six percent heat rate improvement or any broad target, as estimated by EPA."[25] Moreover, Sargent & Lundy, LLC, notes that the feasibility of heat rate improvements at an individual generating unit are limited by "a number of factors, including plant design, previous equipment upgrades, and each plant's operational restrictions."[26]

The FPSC also questions the reasonableness of investing in heat rate improvements only to then retire the plants based on the re-dispatch assumptions in Building Block 2 and the 2020 interim performance requirements. The EPA fails to adequately address the inconsistency of using heat rate improvements in coal-fired units to calculate Building Block 1 savings, only to then substantially negate those savings by re-dispatching from those improved coal-fired units to natural gas-fired units for the savings presented in Building Block 2. While EPA's NODA appears to allow recognition of the remaining book life, EPA did not identify any corresponding changes to its proposed state interim and final emission performance requirements. The EPA should allow certain coal units with long, undepreciated remaining useful lives to be exempt from an interim emission performance requirement and relax the 2030 requirement, as long as these units are brought into compliance with the state implementation plan at the end of their useful lives. This would ameliorate much of the stranded cost burden associated with a strict adherence to a 2030 compliance date. If EPA does not modify the assumptions of Building Block 1 in the proposed BSER, the rapid retirement of coal-fired generation due to the re-dispatch envisioned in Building Block 2 would cause significant costs for Florida and its ratepayers in terms of stranded assets.

[25] Letter from Raj Gaikward Ph.D., VP Sargent & Lundy to Mr. Rae Cronmiller, National Rural Electric Cooperative Association.
[26] *Id.*

b. Building Block 2

In EPA's calculation of Building Block 2, EPA states that Florida's natural gas-fired combined cycle (NGCC) plants operated at a capacity factor of 51 percent.[27] Based on EPA's assumptions of an increase in NGCC capacity factor from 51 percent to 70 percent of capacity, EPA calculates a re-dispatch of existing 2012 NGCC generation that would result in CO_2 emission reductions. EPA's characterization that Florida's NGCC fleet operated at a "51 percent capacity factor" in 2012 is incorrect due to EPA's use of nameplate capacity. When discussing generator capacity, system planners and state regulators distinguish generator capacity from nameplate capacity for important reasons. A generator's nameplate capacity is "the maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer."[28] By contrast, the generator capacity is "the maximum output, commonly expressed in MW, that generating equipment can supply to system load, adjusted for ambient conditions."[29] The EPA states it wanted to use net generating capacity but asserts, incorrectly, that net capacity data was not readily available.[30] Therefore, EPA's choice to use nameplate capacity for purposes of assessing annual capacity factors is not supported by its referenced material.[31, 32] The FPSC contends that EPA should revise its calculations of assumed reductions under Building Block 2 to reflect the 2012 natural gas combined cycle net, not gross capacity.

The EPA's proposal does not identify the consequences on Florida's electric service reliability, transmission load flow, or the scheduling of how its program of displacing existing

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[27] U.S. Environmental Protection Agency, Data File: Goal Computation – Appendix 1 and 2, http://www2.epa.gov/carbon-pollution-standards/clean-power-plan-proposed-rule-technical-documents (last updated June 26, 2014).
[28] U.S. Energy Information Administration, Glossary: Generator nameplate capacity, http://www.eia.gov/tools/glossary/index.cfm?id=G (last visited July 18, 2014).
[29] U.S. Energy Information Administration, Glossary: Generator capacity, http://www.eia.gov/tools/glossary/index.cfm?id=G (last visited July 18, 2014).
[30] U.S. Environmental Protection Agency, GHG Abatement Measures, 3-6 (June 2014). The U.S. Energy Information Agency's database of Forms EIA-860 contains summer and winter capacities for facilities across the U.S. The EPA even refers to Form EIA-860 elsewhere in the GHG Abatement Measures; therefore, it is inexplicable that the EPA chose to use the theoretical nameplate capacity over the known and modeled summer/winter capacities reported in the documents the EPA used to perform the BSER analysis.
[31] *Id.*
[32] U.S. Energy Information Administration, Form EIA-860 for 2012, *available at* http://www.eia.gov/electricity/data/eia860/index.html (last visited July 18, 2014).

coal-fired baseload facilities could reasonably be implemented.[33] Florida's coal-fired facilities and NGCC facilities are not typically co-located nor generally located within the same utility system. In Florida, the existing transmission system has not been developed with the expectation that NGCC facilities would displace all or most of the baseload coal-fired facilities. Consequently, it would be necessary to conduct a Florida-specific transmission study to assess the full effects of such a program, which the EPA does not appear to have included in its reference material or factored into the proposed compliance schedule. EPA's NODA appears to acknowledge these are significant and material issues. However, no changes to the Proposed Rule were presented. While EPA has assumed future wholesale level transactions between reliability regions, EPA has not provided the FPSC with any support documentation of electric reliability within the Florida Reliability Coordinating Council region and the potential impacts to each of the Florida cooperative, municipal, and investor-owned systems. Absent this type of data, the FPSC does not believe that electric reliability will be maintained if the Proposed Rule is implemented.

c. Building Block 3

EPA assumes growth in renewable energy and the retention of "at risk" nuclear in the calculation of Florida's performance requirements. EPA assumes six percent of Florida's historical nuclear capacity to be at risk based on a generic, non-Florida specific assumption. This assumption has the effect of creating a more stringent performance requirement for Florida and decreasing compliance flexibility. Therefore, the FPSC urges EPA to remove the six percent "at risk" nuclear from the calculation of Florida's performance requirements.

The EPA's adoption of North Carolina's renewable energy and energy efficiency portfolio standard (REPS) for Florida does not realistically reflect the available renewable resources or policy framework in Florida.[34] For example, Florida lacks viable wind resources

[33] http://www.epa.gov/airmarkets/progsregs/epa-ipm/docs/v513/HRI%20Appendix.pdf and http://www.epa.gov/airmarkets/progsregs/epa-ipm/docs/v513/Chapter_3.pdf

[34] The FPSC appreciates the additional information regarding "Framework for Assessing Biogenic CO_2 Emissions from Stationary Sources," issued November 2014, as to how EPA intends to treat biomass generation, including municipal solid waste options. See http://www.epa.gov/climatechange/downloads/Framework-for-Assessing-Biogenic-CO2-Emissions.pdf.

and has limited biomass opportunities, given competing industrial use of biomass resources.[35] Additionally, baseload solar generation has yet to be a proven commercially available option in Florida.

The EPA elected to group Florida with Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee to form its modeled Southeast region for the purpose of assigning its assumed achievable renewable energy generation requirement. Of that group, North Carolina is the only state that has a REPS requirement. The FPSC contends that EPA has overestimated the assumption for potential renewable energy generation for its southeast region by misinterpreting North Carolina's REPS.[36] As a part of North Carolina's REPS, the state's investor-owned utilities are allowed to utilize energy efficiency programs to achieve up to 25 percent of the annual renewable goal increasing to a maximum of 40 percent in 2021. Additionally, North Carolina's REPS allows municipal and co-operative utilities to use energy efficiency programs to achieve all of their annual renewable goals. By using North Carolina's REPS as a component of the BSER, EPA has double-counted the use of energy efficiency, given the interaction between Building Blocks 3 and 4.

The EPA appears to acknowledge the importance of incorporating renewable energy generation based on the actual potential for each state. The approach described in the technical support documentation "Alternative Renewable Energy Approach" may be closer to representing state realities as it relies in part on a technical potential study conducted by National Renewable Energy Laboratory.[37] This approach, however, falls short due to the use of EPA's Integrated Planning Model (IPM) to evaluate market potential of each type of renewable generation based on a regional dispatch area and the use of an estimated incremental cost of renewables. The EPA did not provide information regarding the impact on the alternative approach to the emission performance requirements for Florida, specifically whether the adoption of the alternative approach would affect the other Building Blocks.

[35] Florida Department of Agriculture and Consumer Services, Division of Forestry, *Woody Biomass Economic Study*, March 10, 2010.
[36] N.C. Gen. Stat. Section 62-133.8 (2013).
[37] http://www2.epa.gov/sites/production/files/2014-06/documents/20140602tsd-alternative-re-approach.pdf

In November, EPA released examples on how to convert the rate-based performance requirement to an equivalent mass-based standard. The calculations show that EPA's BSER for existing EGUs presumes that all growth in renewable generation displaces generation from existing EGUs, rather than avoiding new fossil generation. This is not a realistic assumption for Florida. Consequently, EPA overstates the level of future renewable generation reasonably attributable to existing affected EGUs. If EPA continues to include renewable generation in establishing emission standards, then it should explicitly set standards for renewable generation that directly displaces existing affected EGU generation.

Furthermore, it appears that EPA has not taken into account requirements under PURPA and Florida law regarding the purchase of renewable energy by Florida utilities. The FPSC is required by these laws to take into account the utility's avoided cost when reviewing the purchase of renewable energy generation. The FPSC asserts that federal and Florida law, along with the technical feasibility of renewables in Florida (not in North Carolina or the region), should determine the extent of renewable generation that could be developed and used to offset emissions from fossil sources.

d. Building Block 4

The EPA's BSER determination should not include reductions attributable to energy efficiency programs because these programs are not under the direct control of the utility and cannot be traced to solely offsetting CO_2 emissions from existing affected EGUs. The EPA would need to demonstrate a direct correlation to a specific affected EGU using a generating unit-by-generating unit analysis. To the best of the FPSC's understanding, EPA has yet to perform such an analysis. Florida should, however, have the discretion to comply with any standards by utilizing cost-effective end-use energy efficiency programs that can be demonstrated to permanently reduce CO_2 emission at an affected EGU, while also not sacrificing reliability or resulting in excessive cost impacts.

If EPA continues to include energy efficiency as a component of its BSER, it should modify Florida's energy efficiency requirement to reflect Florida-specific realities. The EPA's

proposed ten percent reduction in net retail electric sales as a result of Building Block 4 is unreasonable, in terms of both proposed cost and achievability, based on Florida's actual historic data. In over 30 years of offering demand-side management and energy efficiency programs, the FEECA utilities have reduced winter peak demand by an estimated 6,465 MW and reduced annual energy consumption by an estimated 8,937 GWh. In 2012, FEECA utilities achieved an annual energy consumption reduction of 482.3 GWh. Florida is already implementing the cost-effective energy efficiency measures available under the state's specific circumstances.

Additional MWh savings are becoming increasingly difficult because federal and state energy efficiency standards and building codes have become more stringent, leaving less energy savings potential from utility or other third party actions. Setting an emission performance requirement without considering the Florida-specific technical or achievable potential or the cost-effectiveness of the necessary programs to achieve the requirement is contrary to Florida Statutes and the CAA.

VI. FPSC Concerns Regarding Proposed Rule Implementation

Electricity usage in Florida is impacted by the state's unique weather, customer base, and high reliance on electricity for cooling and heating. Florida has the highest number of cooling degree days of any state in the continental U.S., indicating the greatest need for air conditioning in the summer months. Compared to other states, Florida's customers rely more heavily on electricity to meet their energy needs, rather than the direct use of natural gas or other fuels, for cooling and heating. Residential consumers make up almost 89 percent of Florida's electricity customers. Approximately 85 percent of Florida's residential customers' energy requirements are met with electricity, which makes Florida's customers particularly sensitive to electric rate increases. This, combined with Florida's geography and climate, requires the FPSC to carefully examine all factors related to electricity generation to ensure cost-effective, reliable electricity for all Floridians.

a. Fuel Diversity Consequences

In 2012, Florida utilities had a net summer generating capacity of 57,454 MW.[38] Transmission capability to import energy into peninsular Florida from other states is approximately 3,600 MW, some of which is already committed to the import of out-of-state generation to meet the state's current and future power needs. Florida's reliance on natural gas as a generation fuel has significantly increased over time and has resulted in a state policy to seek greater diversification in our fuel mix. Currently, approximately 60 percent of the electric power in Florida is generated from natural gas. The concern with Florida's current dependency on natural gas generation pales in comparison to EPA's modeled projection that by 2025 Florida will be using natural gas generation to serve 85 percent of load.[39]

Florida law requires the FPSC to determine the need for new generating facilities and specifically to consider the need for electric system reliability and integrity, adequate electricity at a reasonable cost, and the need for fuel diversity and supply reliability.[40] It is important for Florida to maintain a diversified generation fuel source mix when seeking to comply with relevant CO_2 standards because a diversified fuel supply can enhance system reliability and significantly mitigate the effects of volatile fuel price fluctuations, extreme weather events and unplanned plant outages. Additional pipeline capacity would have to be built to accommodate a further reliance on natural gas as a generating fuel. One of Florida's primary pipelines crosses the Gulf of Mexico and is subject to some risk of hurricanes, which adds to the concern of diminished fuel diversity.

b. Reliability Consequences

The FPSC is also concerned about the impact of additional intermittent resources on service reliability requirements. Because of the state's unique characteristics described earlier, Florida requires a robust, diverse, and dispatchable baseload generating fleet. However, many of

[38] Florida Public Service Commission, Facts and Figures of the Florida Utility Industry (Mar. 2014) p. 1. http://www.floridapsc.com/publications/pdf/general/factsandfigures2014.pdf
[39] EPA's "Parsed File" Option 1 State, 2025.
[40] Section 403.519(3), Florida Statutes.

the low- or zero-carbon technologies EPA assumes in its Building Block 3 allocation to Florida are intermittent, non-dispatchable, non-baseload technologies. For example, in 2013, the monthly capacity factor for solar photovoltaics in the U.S. ranged from 13 to 22 percent.[41] Due to operational constraints from the availability of sunshine, there is no currently demonstrated baseload solar option. The low capacity factors of many low- or zero-carbon technologies (excluding nuclear and possibly co-firing with biomass) combined with Florida's need for dispatchable baseload generation means that Florida would likely need to build additional natural gas-fired facilities and related infrastructure for use as stand-by units for reliability purposes simply because of EPA's assumed requirement.[42] A recent report assessing Germany's efforts to increase renewable generation resources noted an expected cost increase associated with re-dispatch, curtailment, and other remediation actions necessary to maintain reliability.[43] EPA errs in failing to account for these additional expenditures or the implementation time needed to ensure electric reliability.

c. Need for Safety Valve

Given the untested approach EPA has used in developing the BSER and the broad application of non-state specific assumptions, there remains considerable uncertainty about the ability of states to comply with these stringent performance requirements. Such uncertainty calls for some type of off-ramp or safety valve for those states that – despite their best efforts – cannot fully comply with the performance requirements. Safety valve modifications could take the form of a relaxation of the performance requirements, exemptions for must run or critically needed units, or extension of time to meet the 2030 requirement. State Implementation Plans should be allowed to include such provisions to guard against unforeseen impacts on reliability and cost. It is imperative that any rule EPA adopts contain such flexibility.

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[41] U.S. Energy Information Agency, Electric Power Monthly (February 2014), Table 6.7.B. *available at* http://www.eia.gov/electricity/monthly/current_year/february2014.pdf.

[42] http://www.brattle.com/system/publications/pdfs/000/005/060/original/Solar_Energy_Support_in_Germany_-_A_Closer_Look.pdf?1406753962.

[43] Id, pp. 28-37.

d. Cost of Proposal

At this time, states cannot even begin to develop reliable estimates of compliance costs with the Proposed Rule. Without knowing the final requirements of an EPA approved State Implementation Plan, individual utilities will not be able to determine their most cost-effective compliance path. In turn, states will not be able to develop aggregate costs resulting from consolidation and coordination of each utilities' compliance plans across the state. However, the Commission is confident that if EPA's proposed BSER is not revised, the stringent emission performance requirements will require substantial compliance costs for Florida. These costs include compliance costs assumed in the Building Blocks and additional costs such as the building of new natural gas pipelines, the building of new generation, the possible improvements and/or building of new transmission lines, and the cost of stranded assets resulting from the premature retirement of existing baseload generation. Therefore, any estimate of compliance costs may be grossly understated at this time. It is important to emphasize that pursuant to Florida Statutes, investor-owned electric utilities are entitled to recover prudently incurred costs in complying with environmental laws or regulations, including the Clean Air Act.[44]

Preliminary estimates from the Florida Electric Power Coordinating Group, Environmental Committee, support the conclusion that EPA may have understated the potential range in its estimated direct and indirect costs. These preliminary estimates show that average statewide retail rates could increase 25 to 50 percent by 2030 as a result of the Proposed Rule.[45] This estimated range of potential impact is necessarily based on idealized and simplifying assumptions for high-level screening purposes.

VII. Conclusion

The FPSC recognizes the necessity and role of EPA in addressing public health and environmental issues. However, as discussed throughout these comments, the proposed emission

[44] Section 366.8255, Florida Statutes.
[45] Florida Electric Power Coordinating Group, Environmental Committee, *Impact of EPA's CO2 Proposal on Florida's Electric Generation System*, October 2014.

reductions do not reflect what is technically or economically feasible in Florida. There are at least three critically needed revisions before EPA moves forward with the Proposed Rule. First, EPA should set performance requirements on affected EGUs subject to Section 111(d) and those requirements should be established for these EGUs based on specific technology and equipment at these facilities or other onsite actions within the control of a utility. Second, any components of the BSER should be based on Florida-specific policies and circumstances, rather than using national and regional assumptions. Lastly, the EPA should only establish a final compliance date. Interim performance requirements should not be mandatory, to allow time to construct new and upgraded electric grid and fuel infrastructure so as not to jeopardize reliability. EPA's failure to consider and incorporate concerns raised in these comments will result in unreasonable and costly emission performance requirements for Florida and its ratepayers.